

INDEX TO VOLUME 170, JANUARY-JUNE, 1944

— A —			
Abrasive bands	278	Cotton:	
Acid-proof mortar	276	Boll weevil, beating	82
Adhesives, progress of	272	Hydroponics	78
Air-Conditioning:		Coupling, self-sealing	88
Germ killing by	273	Cranberry wax	153
Unit room cooler and conditioner	99	Crane stability	159
Airports, tomorrow's	272	Crankshafts, cast	69
Alcohol, produced from wood	151	Criminology, use of paint in	153
Alloy-clad	156	Cutter checker	280
Alloys:			
Aluminum, German	177		
Low-melting, prototype dies	132	Dehydration:	
Ultra-low-melting	16	Food	274
Altimeter	90	Household products, "dehydrated"	41
Aluminum:		Dew point meter	210
Air-sprayed coating	2	Diamond-bonded wheel	88
Alloys, German	117	Dies:	
Amplidyne puts short-circuits to work	29	"Porcupine" punches 388 holes	85
Angle comparator	42	Prototype, low-melting alloy	132
Automatic pilots	36	Diesel ring sticking, recording of	134
Automobiles:		Draw dies, marking with	281
Bumpless rides	159	Drill-press feed	136
Tomorrow's	3	Drug sources assured to U. S.	86
Aviation:		Drying oils	174, 205
Air cargo development	36	Dust collector, combination	183
Air transportation	13		
Aviation's hot-house	64		
Bossi helicopter	192	Electric truck controller	280
Cargo by air	3	Electrical:	
Cargo stowing	15	Buses, iron	128
Curtiss Hellidiver (A-25)	216	Challenge	271
Electronic	256	Heating	274
Engines of the air	109	Electricity, definition requires volumes	86
Heater, high altitude	81	Electrochemical removal of broken tools	156
"Hellcat," combat advantages of	15	Electrode, AC-DC	138
High-octane gas	262	Electromagnetic manganese	252
Ice formation, propeller	15, 271	Electronics:	
Jet-propulsion flight	166	Cathode-ray tube	10
Lockheed "Lightning"	264	Electronic aviation	256
Motor speeds	227	Electronic processing	106
Post-war	216	Gyro balancer	258
Power eggs, Lockheed "Constellation"	264	Heating	258
Radio range alarm	258	Jobs in industry	107
Rayon gasoline tanks	82	Microanalyzation	163
Self-starting tires	111	Octane tester	210
Surveyed	214	Prospecting for petroleum	208
Tough planes withstand abuse	111	Radio heat	29
		Railroad 'phone	224
Barge linings, synthetic rubber	174	Rubber sheet inspection	210
Barometer	90	Split-second timer	258
Biological mining	28	Statistics show trends in	57
Bleaching process, whiter paper	249	Stop controls machine	57
Bombs:		Supercontrol by	55
Fuse test	34	Wall Street and	3
Mosquito	35	Engines:	
Boring tool	89	Air-cooled	222
Brush cleaner	279	Off the air	109
Building boom, post-war	51	Engraver, pantographic	137
Buildings, concrete	204	Explosives, inside and out	259
Bumpless rides	159	Eyes, bird-like, needed by fliers	111
Buses, iron pipe	128		
— C —			
Camouflage, sludge	21	Farm factories	181
Capacitors, porcelain-clad	88	Fastener:	
Cast cranks	69	Flexible	43
Casting, progress in	115	Spring-lock airplane	184
Cathode-ray tube	10	Felt for insulation	255
Cellophane:		Fiberboard, substitution of	120
Sound on	159	Fibers to the fore	147
Wound infection prevented by	220	Filter of rubber	182
Cemented carbides, ceramics machined with	228	Fire extinguishers	129, 230
Centrifugal clutch, universal	186	Fire prevention	33
Checking rolls	41	Flame cleaning	228
Chemicals:		Flame-proofed plywood	122
From gas	99	Flavor and vitamins, in dried food	226
"Secondary," for synthetic rubber	178	Flaw detector	57
Chemistry, progress in substitution	205	Floors, Ply-Tech	176
Chicago's new subway	112	Flow gage	184
Chickens and ultra-violet	275	Fluorescent lamp, tiny	172
Chromium, new plating system for	233	Fluoroscopic inspection	252
Cinchona trees in South America	133	Flux-gate compass	32
Circuit tester, high-speed	12	Food dehydration	226, 274
Cleaning:		Foremen, importance of	162
Flame	255	Foundry progress	98
Goggle-cleaning cabinet	138	Fuel, motor, future of	242, 247, 262, 268
Gun barrels	249	Fungicide	153
Plastic cleaner	186		
Coal, gasoline from	73		
Coal-in-oil fuels	30		
Coal-tar fuel	174		
Coating, rubber, propeller shafts	270		
Coke, better, from anthracite slack	77		
Color codes	63, 224		
Compass, flux-gate	32		
Compressed air:			
In industry	24		
Tools, wood carving	133		
Compressor:			
Control	280		
Wheelbarrow type	232		
Concrete:			
Buildings	204		
Gasoline storage tanks	114		
Prestressed	204		
Scaling minimized	22		
Conservation:			
Military	18		
Naval stores	82		
Construction, war, wood in	202		
Conveyor belt	41		
Core resin	173		
Cork substitute	207		
Corrosion resistance	18		
— D —			
Dehydration:			
Food	274		
Household products, "dehydrated"	41		
Dew point meter	210		
Diamond-bonded wheel	88		
Dies:			
"Porcupine" punches 388 holes	85		
Prototype, low-melting alloy	132		
Diesel ring sticking, recording of	134		
Draw dies, marking with	281		
Drill-press feed	136		
Drug sources assured to U. S.	86		
Drying oils	174, 205		
Dust collector, combination	183		
— E —			
Electric truck controller	280		
Electrical:			
Buses, iron	128		
Challenge	271		
Heating	274		
Electricity, definition requires volumes	86		
Electrochemical removal of broken tools	156		
Electrode, AC-DC	138		
Electromagnetic manganese	252		
Electronics:			
Cathode-ray tube	10		
Electronic aviation	256		
Electronic processing	106		
Gyro balancer	258		
Heating	258		
Jobs in industry	107		
Microanalyzation	163		
Octane tester	210		
Prospecting for petroleum	208		
Radio heat	29		
Railroad 'phone	224		
Rubber sheet inspection	210		
Split-second timer	258		
Statistics show trends in	57		
Stop controls machine	57		
Supercontrol by	55		
Wall Street and	3		
Engines:			
Air-cooled	222		
Off the air	109		
Engraver, pantographic	137		
Explosives, inside and out	259		
Eyes, bird-like, needed by fliers	111		
— F —			
Farm factories	181		
Fastener:			
Flexible	43		
Spring-lock airplane	184		
Felt for insulation	255		
Fiberboard, substitution of	120		
Fibers to the fore	147		
Filter of rubber	182		
Fire extinguishers	129, 230		
Fire prevention	33		
Flame cleaning	228		
Flame-proofed plywood	122		
Flavor and vitamins, in dried food	226		
Flaw detector	57		
Floors, Ply-Tech	176		
Flow gage	184		
Fluorescent lamp, tiny	172		
Fluoroscopic inspection	252		
Flux-gate compass	32		
Food dehydration	226, 274		
Foremen, importance of	162		
Foundry progress	98		
Fuel, motor, future of	242, 247, 262, 268		
Fungicide	153		
— G —			
Gage blocks:			
Salvage of worn	255		
Vernier	183		
Gages:			
Flow	184		
Pipe gage	185		
Gas detector	177		
Gas turbine	51, 127		
Gasoline:			
From coal	73		
Future of	242		
High-octane	262		
Post-war	247, 268		
Gear shaving	176		
Generator, portable	137		
Germ killing by air-conditioning	273		
Girders, plywood	114		
Glass:			
Chutes	36		
Jewels	182		
Overcoats for storage batteries	9		
Plastic	207		
Washers	60		
What glass is and isn't	22		
Gloves, synthetic-rubber	233		
Gluing wood	176		
— H —			
Goggle-cleaning cabinet			
Gold, industrial uses of	122		
Grade labeling, threat to industry	194		
Gray iron, advantages	83		
Grinders, carbide tool	137		
Gun-barrel cleaning	249		
Gun-director	30		
Gun recoil, reduction of	66		
Gyro balancer, electronic	258		
— I —			
Hammers, slow-hitting			
Hand-grenade fuses	108		
Handling of materials	61		
Hardening, precision	117		
Heaters:			
Aircraft	81		
Unit	99		
Heating:			
Electrical	274		
Electronic	258		
Height gage adapter	90		
High-octane gas	262		
High-voltage lines, copper saved in	63		
Highway construction, post-war	114		
Hill electron microanalyzer	163		
Housing:			
"Miracle" homes of the future	194		
Prefabricated houses	252		
Hydraulic:			
Power transmission	194		
Puller	234		
Hydroponics:			
Cotton	78		
Success based on seed bed	172		
— J —			
Jeeps, industrious			
Jet-propulsion flight	255		
— K —			
Kelvin bridge, new			
— L —			
Lacquer wax			
Lacquers, penetrating primer	219		
Lathe centers	279		
Lattice, what is an atomic	39		
Lead:			
Industrial uses of	250		
Plating	186		
Level-buoy			
Light metals:			
Competition with steels	235		
Materials battle	228		
Lock nuts	267		
Lockheed "Lightning"	264		
Low-melting alloys:			
Fluxed solder	185		
Prototype dies made with	132		
Ultra	16		
Lubricants, soaps in			
Machine	42		
Modern	211		
Speeding production	31		
Luminaire, one-piece	138		
Luminous paints			
— M —			
Machining:			
Ceramics with cemented carbides	228		
Piston, simplified by ingenious jig	84		
Magnetic chuck, versatile	279		
Magnets, road cleaning	37		
Management can learn	3		
Manganese, electrolytic	252		
Marker, curved surface	232		
Marking:			
Machine for	183		
With draw dies	281		
Marvinol, new elasto-plastic	79		
Masking stickers	138		
Materials handling	61		
Measuring roughness	118		
Mechanized tools for the farm	51		
Menthols, synthetic	153		
Metal-forms, mass production	199		

Metal resources dwindle, as	7	Posture, improved, in industry	63	Offer solutions	247
Microanalyzer, Hillier Electronic	163	Potato plastics	124	Plastic-glass	207
Micrometer, special	162	Powder metallurgy	235	Plastics, see Plastics	
Microradiography	156	Powder separator, electronic	210	Post-war	9
Mildew prevention	35	Power:		Protein fiber	217
Milkweed floss	268	Packaged	38	Rubber:	
Mining, biological	28	Transmission, hydraulic	194	Barge linings	174
Mobile inspection unit	278	Power eggs changed quickly	264	Gloves	233
Mortar, acid-proof	276	Precision:		Renders natural rubber immaterial	83
Mosquito bomb	35	For every plant	160	"Secondary" chemicals required for	178
Motor:		Hardening	117	Starting point for	49
Deceleration, study of	226	Printing plates, plastic and paper	226	Uskol, for many applications	84
Speeds, recorded automatically	227	Production:		Soybean protein fiber	217
Thirty horsepower	277	Mass production metal-forms	199	Sponge	41
Turns at 60,000 r.p.m.	130	Welding in	157	Tires	58
Warm-up expedited	130	Propellers:			
Mounting, resilient	276	Checking by X-ray	80	— T —	
Movie film for television	242	Ice formation prevented	15, 271	Tachometer	138
Multigraph type	184	Prospecting for petroleum	208	Tanks:	
— N —		Protractor, lock-type	87	Agitator, new	281
Natural gas, chemicals from	99	Puller, hydraulic	234	Concrete gasoline storage	114
Naval stores, conservation program	82	Quench tempering	87	Rayon gasoline, aircraft	82
Nitrocellulose in lacquers	105	Quenching, bright gas	134	Tantalite, Brazilian	225
Nuts, loosening tight	281	— Q —		Telephone:	
Nylon rope	175	Radio:		Loudspeaking, eliminates "talk-listen" switch	108
— O —		Frequency-modulation	3	Two-way electronic train	224
Octane tester, electronic	210	Heat	29	Television:	
Office efficiency, improving	242	On the railroad	99	Films for	242
Office equipment for factory workers	63	Range alarm	258	Receivers	3
Oil:		Relays, television network	128	Relays	128
Hole inspection	159	Railroad, two-way electronic telephone	224	Test building provides many "climates"	114
Hydraulic power transmission	194	Rain test, fabrics	268	Testing:	
Penetrating	281	Rayon:		Test plugs	136
Oil-well drill bits	210	Fiber	228	Vibration fatigue tester	232
Oscilloscope	278	Gasoline tanks, aircraft	82	Timer, split-second electronic	258
— P —		Insulation on wires	134	Tin:	
Packaged power, truck	38	Refractories, zircon	156	Cans, containers for dehydrated foods	51
Packaging:		Refrigerated metals	67	Post-war	99
Rugged packages for foods	80	Refrigerators, post-war	219	Tires:	
Tin cans for dehydrated foods	51	Refuse, pneumatic disposal of	99	Cotton hydroponics point way to better	78
Padding, protection	87	Research:		Self-starting airplane	111
Paint:		Defined	33	Synthetic	58
For many purposes	51	Facilities available for small businesses	169	Titanium dioxide, whitest of whites	277
In criminology	153	Management	37	Tools:	
Luminous	3	Regimentation of	51	Boring tool	89
Measurements	124	War-necessitated	179	Broken, electrochemical removal	156
Progress	194	Resilient mounting	276	Compressed-air, wood carving	133
Pantographic engraver	137	Resins:		Grinding	66
Paper:		Dryer	231	Plastics in	222
Future of	3	Impregnated wood	242	Transparent tubing	270
Whiter	249, 277	New	272	Transportation:	
Paste spreader	41	Polythene	207	Air	13
Patents, lost-wax	18	Soil stabilization	249	Cargo by air	3
Payroll calculator	184	Resurfacing compound	87	Tubing, transparent	270
Penicillin:		Rivet:		Turbines:	
Production	60	Driver	90	Blades	178
Speeding	9	Set	186	Gas	51, 127
Petroleum, prospecting for	208	Road cleaning magnet	37	Ship, increase speed	77
Phosphate:		Rot-proofing	227	Type, multigraph	184
Coatings, corrosion resistance increased by	18	Roughness, measuring	118	— U —	
Feeds, for animal use	105	Rubber:		Ultrasonic waves	173
Pig de-hairing	231	Belt splicing	280	Ultra-violet rays, more chickens through	275
Pillboxes, plastic	249	Coating propeller shafts	270	Universal centrifugal clutch	186
Pinion gears, insulated	185	Conductive	147	Uskol, for many rubber applications	84
Pipe gage	185	Filter of	182	— V —	
Pipe lines, portable	220	Sheet inspection	210	"V" block, improved	89
Piston machining, simplified	84	Synthetic, see Synthetics, Rubber		Varnishes, penetrating primer	219
Plastics:		— S —		Ventilator, self-powered	233
Applications	38	Safety increases:		Vibeston, sound-deadening composition	132
Board, development of	86	"Sand Jacks"	204	Vibration:	
Cleaner	186	Sanding pad, detachable	232	Failure reduced	69
Future of	103	Searchlight, air-cooled mercury arc	130	Fatigue tester	232
In tools	222	Shark vitamins	207	Vitamins:	
Innersoles, washable and sanitary	132	Shearproof drive	41	Flavor and, dried-food industry	226
Marvinol, new elasto-plastic	79	Ship turbines increase speed	77	Shark	207
Materials battle	228	Sludge camouflage	21	Voltage selector	137
Pillboxes	249	Snow removal	19	— W —	
Plastic-glass	207	Soil in lubricants	60	Wall protection	88
Plating on	232	Soil stabilization	249	Washers, glass	60
Polyvinyl alcohol	76	Solder, fluxed	185	Water conditioning	265
Potato, using agricultural wastes	124	Sole material	38	Water wells, horizontal	21
Printing plates	226	Sound:		Wax:	
Plate punch	136	Conditioning	28	Alternate	43
Plating:		Debonding	132	From cranberries	153
Chromium, new system for	233	Free field sound room	180	Weight sorting	174
Lead	186	On cellophane	159	Welding:	
On plastics	232	Soybean protein fiber	217	Arc welder	224
Plywood:		Spatter-proofing	42	Deaerating heater section-built	28
Flame-proofed	122	Sponge, synthetic	41	In production	157
Girders	114	Spring-lock airplane fastener	184	Post-war	32
Pneumatic:		Stainless steel, more	255	Storage-battery welders	
Disposal of refuse	99	Standards, value of	147	Whitest of whites, titanium dioxide	277
Unloading	31	Statistics show trends in electronics	57	Wire, steel, replaces copper	129
Pocket protection	43	Steel:		Wood, see also Plywood:	
Polishing bobs	231	High alloy competition	235	Better surface finished for	219
Polythene resins	207	Stainless, see Stainless Steel		Carving, speeded by compressed-air tools	133
Polyvinyl alcohol	76	Wire, replaces copper	129	Distillation	270
Post-war:		Storage batteries, glass overcoats for	9	Gluing	176
Aircrafts	272	Substitutions:		In the future	99
Automobiles	3	Cork substitute	207	In war construction	202
Aviation's hot-house	64	Common substances	131	Post-war	180
Farm factories	181	Progress in	205	Resin impregnated	243
Flying	216	Subway, Chicago's new	112	Transmuted	242
Gadgets must wait	181	Sugar beet seed, improved by grindstone	132	Wound infection prevented by cellophane	220
Gasoline	268	Sugar science	275	— X —	
Highway construction	114	Surface plate	136	X-ray:	
"Miracle" homes	194	Surplusles	51	Connections checked by	57
Plans	147	Synthetics:		New uses for	12
Plastics tomorrow	103	In marine transportation	147	Propeller checking	80
Refrigerators	219	Marvinol, new elasto-plastic	79	— Z —	
Synthetics	9	Menthols	153	Zircon refractories	156
Tin	99	Nylon rope	175		
Welding	32				
Wood	180				

247
207
9
217

174
233
83
178
49
84
217
41
58

138

281
114
82
225

108
224

242
3
128
114

136
232
258

51
99

78
111
58
277

89
156
133
66
222
270

13
3
270

173
1, 127
77
184

173
275
186
84

89
219
233
132

69
232

226
207
137

88
60
265
21

43
153
174

224
28
157
32
234
277
129

219
133
270
176
99
202
180
242
242
220

57
12
80

156

1944